CITY OF ISSAQUAH
MITIGATED DETERMINATION OF NONSIGNIFICANCE (MDNS)

Description of Proposal: Replace existing culverts on Anti-Aircraft Creek at the intersection of Newport Way NW and NW Oakcrest Drive. The existing culvert is vulnerable to sedimentation and has low capacity resulting in flooding of Newport Way NW. The objective of the proposal is to alleviate flooding and maintenance problems and to realign a portion of Anti-Aircraft Creek to its natural drainage pattern. The project consists of replacing the existing undersized culverts with larger box culverts and improving channel grading.

Proponent: City of Issaquah Public Works Engineering
P.O. Box 1307
Issaquah, WA. 98027
Attn: Kerry Ritland

Project Name/ Permit Number: Anti-Aircraft Creek Culvert Replacement
ASDP15-00011

Location of Proposal: Newport Way NW and NW Oakcrest Dr.

Lead Agency: City of Issaquah

Determination: The lead agency for this proposal has determined that it does not have a probable significant adverse impact on the environment. An environmental impact statement is not required under RCW 43.21C.030(2)(c). This decision was made after review of a completed environmental checklist and other information on file with the lead agency. This information is available to the public on request.

Comment/Appeal Period: This MDNS is issued under WAC 197-11-340(2) and 197-11-680(3)(a)vii. There is a 21-day combined comment/appeal period for this determination, between **January 7, 2016 to January 28, 2016.** Anyone wishing to comment may submit written comments to the Responsible Official. The Responsible Official will reconsider the determination based on timely comments. Any person aggrieved by this determination may appeal by filing a Notice of Appeal with the City of Issaquah Permit Center. Appellants should prepare specific factual objections. Copies of the environmental determination and other project application materials are available from the Issaquah Development Services Department, 1775 12th Avenue NW.

Appeals of this SEPA determination must be consolidated with appeal of the underlying permit, per IMC 18.04.250

Notes:

1. This threshold determination is based on review of the following application information prepared by Mead & Hunt: Site Plan and Project Plan Profile, Project Narrative, Supporting Narrative – Criteria/analysis for Fish Passage; JARPA Application, 50% Design Review Document, all submitted October 15, 2015; SEPA Checklist, dated November 3, 2015; Mead & Hunt Technical Memo – Wetland Sediment Deposition, dated December 17, 2015; Cultural Resources Assessment (Cultural Resource Consultants, Inc., June 22, 2015); Wetland and Stream Determination for Issaquah Farms Property, (Schulz, dated October 14, 2014); Wetland and Stream Review for Issaquah Farms Property, (ESA, dated January 26, 2015); and other documents in the file.

2. Issuance of this threshold determination does not constitute approval of the permit. The proposal will be reviewed for compliance with all their applicable codes which regulate development activities, including: Land Use Code, Critical Area Regulations, Shoreline Master Program, Clearing and Grading Ordinance, and Surface Water Design Manual.

Findings:

1. Stream Classification – Anti-Aircraft Creek originates on upper Cougar Mountain, crosses Newport Way NW and is a tributary to Tibbetts Creek. The lower reach of the stream is classified as a Class 2 stream with salmonids in the City's *Stream Inventory and Habitat Evaluation Report* (Parametrix, 2003); due to its assumed connection to Tibbetts Creek, the stream rating was based on a qualitative field assessment. However, there is a large wetland complex located between the stream segment along Newport Way NW and Tibbetts Creek which prevents fish access. There have been two recent site-specific reviews of the creek (Schulz, 2014 and ESA, 2015) which concluded that there is no channelized stream flow through the large wetland complex; the stream flow becomes distributed between sub-surface flow (75% of flow) and sheet flow (25% of flow) dispersed through the reed canarygrass wetland, essentially preventing fish access from Tibbetts Creek to the stream segment adjacent to Newport Way NW. The studies therefore concluded that the stream reach on the west, upstream side of the wetland complex is a Class 3 intermittent stream, while the stream segment on the east, downstream side of the wetland with a channel connection to Tibbetts Creek is a Class 2 stream with salmonids. Class 3 streams require a 50-foot buffer and Class 2 streams with salmonids require a 100-foot stream buffer.

   The Washington Department of Fish & wildlife (WDFW) SalmonScape mapping indicates the existing culvert under NW Oakcrest Dr as an "unknown blockage" and the culverts under Newport Way NW as a "partial blockage." Fish distribution (modeled presence) includes: Sockeye, Coho, Fall Chinook and Winter Steelhead.

2. Background – The culvert replacement project was first identified in the mid-1990s in the Issaquah Creek Basin Plan and has been on the City's stormwater capital facilities plan. A FEMA hazard mitigation grant was submitted in 2012, specifically scoped to address the sedimentation and repetitive flooding impacts on Newport Way NW.

   The objectives of the project are to replace the existing undersized culverts with larger box culverts and to realign and improve channel grading; to rectify the current issue of sediment deposition and road flooding and to restore a more natural drainage pattern. The proposal would increase flood capacity and improve channel grading to allow for transport of naturally occurring sediment in the stream system. In total, 146 feet of existing culverts would be removed/abandoned and replaced with 138 feet of new box culvert.

   On the east side of Newport Way NW, the culvert would extend through a private property and proposed development (Riva Townhouses, SDP15-00004), and an easement for the culvert replacement has been obtained. The two projects, the culvert replacement project and the townhouse development, are independent of each other. The townhouse proposal will fully enhance the wetland and stream buffers on the site as mitigation for their development.

3. Project Description - Currently, Anti-Aircraft Creek flows off Cougar Mountain and when it reaches Newport Way NW it takes a circuitous route: on the west side of Newport Way the creek takes a 90-degree jog flowing northward in a flat constructed drainage ditch parallel to Newport Way NW. The flat, drainage ditch section parallel to Newport Way NW acts as a sediment trap, making it prone to clogging and resulting in flooding of the road during large rain events. The stream then flows through a culvert under NW Oakcrest Drive before flowing through parallel culverts under Newport Way NW, where it flows in an open channel to the edge of the wetland complex upstream of Tibbetts Creek.

On the west, upstream side of Newport Way NW the project would enhance approximately 92 linear feet of the stream channel and create approximately 20 linear feet immediately upstream (west) of Newport Way NW (within a City-owned drainage tract) to align it with the proposed box culvert under Newport Way NW. This would straighten the stream to create the hydraulics needed to move natural stream sediment through the culvert system. The box culvert would replace the drainage ditch parallel to Newport Way NW, and the existing culverts under NW Oakcrest Dr and Newport Way NW would be abandoned in place. On the east side of Newport Way NW, the culvert would extend through a proposed development (Riva Townhouses, SDP15-00004); an easement has been obtained from the property owner of the development site. The culvert though the development ties into a concrete box stilling basin, designed to dissipate energy and reduce flow velocities to minimize downstream erosion. Downstream of the stilling basin, a new stream channel segment (approximately 45 linear feet) would be created and enhanced to the west edge of the wetland complex, meeting back to the point where the existing stream channel enters the wetland. The proposal would not extend into or directly impact the wetland.

Segments of the existing stream channel (total of 332 linear feet) would be filled with the culvert replacement/realignment, including: the existing, unvegetated drainage ditch on the west side of Newport Way (165 linear feet), the stream segment north of Oakcrest Dr NW (40 linear feet), and the existing stream channel (127 linear feet) on the east side of Newport Way NW. These stream segments are upstream of the wetland complex and therefore are not considered fish-bearing. The fill material imported to fill the abandoned stream channel segments shall be certified as a clean source of fill material. The proposal would create approximately 65 linear feet of new stream channel and would enhance approximately 113 linear feet of the existing stream channel.

The applicant evaluated a fish passable culvert under Newport Way NW and concluded it isn't feasible due to constraints of existing utilities in Newport Way NW (24-inch fiber optic duct, 24-inch regional water pipeline, 6-inch natural gas pipeline). Relocating these existing utilities is infeasible. Due to the utilities, the culvert has vertical clearance limitations and could not be designed with the slope, depth and stream bedding for fish passage. The proposed culvert system contains slopes that produce high flow velocities and low flow depths unsuitable for fish passage. The stilling basin or energy dissipater located at the east end of the culvert is also not fish passable due to elevation changes, high-flow velocities, and the intermittent flows. It's noted that the stream segment adjacent to Newport Way NW in the project area is not considered a fish stream because a wetland complex prevents fish migration from Tibbetts Creek (see Stream Classification section above). The Mead & Hunt – Supporting Narrative Memo - Criteria/analysis for Fish Passage, dated October 15, 2015, provides more detailed analysis of why the culvert replacement cannot meet fish passage standards.

Based on results of the hydraulic analysis, the proposed culvert conveyance is designed to convey the 100-year design storm for Anti-Aircraft Creek, with a foot of freeboard to ensure water levels would not overtop the culvert and flood Newport Way NW. The culvert system and regrading of the creek would increase flow velocities to address the existing problem of sediment settling and buildup behind the culverts.

The upstream conditions of Anti-Aircraft Creek show a massive amount of sediment transport due to high energy flows that erode the channel banks and have incised the stream, indicative of unstable channel morphology. Addressing the upstream conditions is not in the scope of this project. However, the culvert system has been designed to transport the upstream sediment load. The proposed culvert system and stream regrading would not cause upstream issues; the hydraulic model shows no evidence of backwater that would have an upstream effect.

An important design element of the project is to improve the existing problem of sediment deposition caused by the existing drainage ditch and culvert configuration, which results in maintenance issues and flooding Newport Way NW. The new culvert system is designed to carry the sediment load under Newport Way NW and onto the downstream channel. The sediment load is expected to be primarily from the

upstream creek channel itself since the larger contributing drainage basin is mostly undeveloped and forested. The sediment load from the creek is dominated by relatively coarse bed load gravels. It's anticipated that sediment deposition and the erosion process would restore a natural stream forming process; eventually creating a meandering stream channel through the wetland and transporting coarse sediments to supplement spawning gravels in Tibbetts Creek. (See Hunt & Mead Technical Memo – Wetland Sediment Deposition, dated December 17, 2015)

4. Stream enhancement: The proposal would enhance approximately 92 linear feet of the stream channel and create 20 linear feet of stream channel immediately upstream (west) of Newport Way NW, and create 45 linear feet of new stream channel and enhance 21 linear feet downstream of the stilling basin. Existing native vegetation shall be retained and protected to the extent feasible and all disturbed areas shall be fully restored with native plantings. The applicant shall provide more detailed plans for the new, enhanced stream segments; specifying streambed gravels, placement of large woody debris and stream buffer planting, prior to issuance of construction permits. The entire stream buffer and wetland buffer on the east side of Newport Way NW will be enhanced as part of the proposed development project (Riva Townhouses, SDP15-00004).

5. Cultural Resources: A Cultural Resources Assessment (Cultural Resource Consultants, Inc., June 22, 2015) was completed for the proposal and concluded there is no evidence of archaeological or historic sites in the project location. No further investigation is recommended.

6. Permits: In addition to City permits, the proposal will require review and permit approvals by the Washington State Department of Fish & Wildlife (Hydraulic Project Approval, HPA) and the U.S. Army Corps of Engineers (Section 404 Permit). The HPA will include measures for Best Management Practices (BMPs) for erosion control and spill prevention, construction sequencing, limiting the seasonal timing of construction work, specifics for dewatering the channel and diversion of stream water during construction, and potentially other mitigation measures. Copies of these permits shall be provided to DSD prior to issuance of construction permits.

Mitigation Measures: The Mitigated Determination of Nonsignificance is based on the checklist dated and received November 3, 2015 and submitted application materials. The following SEPA mitigation measures shall be deemed conditions of the approval of the licensing decision pursuant to Chapter 18.10 of the Issaquah Land Use Code. All conditions are based on policies adopted by reference in the Land Use Code.

1. The fill material imported to fill the abandoned stream channel segments shall be certified as a clean source of fill material.

2. Existing native vegetation shall be retained and protected to the extent feasible and all disturbed areas shall be fully restored with native plantings.

3. The applicant shall provide a more detailed plan for the new and enhanced stream segments; specifying streambed gravels, placement of large woody debris and stream buffer planting, prior to issuance of construction permits.

4. The proposal will require review and permit approvals by the Washington State Department of Fish & Wildlife (Hydraulic Project Approval, HPA) and the U.S. Army Corps of Engineers (Section 404 Permit). Copies of these permits shall be provided to DSD prior to issuance of construction permits.

Responsible Official:	Peter Rosen
Position/Title:	Environmental Planner, SEPA Responsible Official
Address/Phone:	P.O. Box 1307, Issaquah, WA 98027-1307 (425) 837-3094
Date: 1/7/2016	**Signature:** Peter Rosen

cc: Washington State Department of Ecology
Muckleshoot Indian Tribe
U.S. Army Corps of Engineers
Washington State Department of Fish and Wildlife
Washington State Department of Archeology and Historic Preservation (DAHP)
Issaquah Development Services Department
Parties of Record